

Date: Wednesday, 6/6/2007 1:56:28 PM
 User: Kim Johnston

Process Sheet

26

Customer	CU-DAR001 Dart Helicopters Services	Drawing Name	FLOAT SKID ASSEMBLY
Job Number	32794A	Part Number	D412742043
Estimate Number	10756	Drawing Number	D3391 REV F
P/O Number	N/A	Project Number	N/A
This Issue	6/6/2007	Drawing Revision	F
Prsh Rev.	NC	Material	N/A
First Issue	N/A	Due Date	6/30/2007
Previous Run	32545	Qty:	1
Written By		Um:	Each
Checked & Approved By	107.06.07		
Comment	Est Rev A 05.10.13 New Issue Est Rev B 06.02.13 ECN 773 dwg @ rev.D Est Rev:C 07-05-28 As per Rev F	KJ/JLM EC JLM	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
1.0	DC	DOCUMENT CONTROL
		Comment: DOCUMENT CONTROL If D412-742-043 is a W/O on its own, Photocopy bluefile and create labels per PPP D412-742-043. CHG003 <i>N/A Photocopy W/O 32795</i>
2.0	D3391023	Mid Tube Assembly
		Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s) pick: Qty Part Number Description Batch 1 D3391-023 Mid Tube Assembly <i>B32238</i>
3.0	D3391025	Aft Tube Assembly
		Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s) pick: Qty Part Number Description Batch 1 D3391-025 Aft Tube Assembly <i>B31060</i>
4.0	D35641	WEARSHOE
		Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s) WEARSHOE Batch: <i>B31417</i>

Hd 07.06.28(1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 6/6/2007 1:56:28 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKID ASSEMBLY

Job Number: 32794A

Part Number: D412742043

Job Number:



Seq #:	Machine Or Operation:	Description :
5.0	D35643	WEARSHOE
	Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)	
	WEARSHOE	
	Batch: B31419	
6.0	D35645	WEARSHOE
	Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)	
	WEARSHOE	
	Batch: B32054	
7.0	D35661	GASKET
	Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)	
	GASKET	
	Batch: B32734	
8.0	D35665	GASKET
	Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)	
	GASKET	
	Batch: B31421	
9.0	AN3C4A	BOLT
	Comment: Qty.: 24.0000 Each(s)/Unit Total : 24.0000 Each(s)	
	BOLT	
	Batch: M104625	
10.0	AN3C6A	BOLT
	Comment: Qty.: 12.0000 Each(s)/Unit Total : 12.0000 Each(s)	
	BOLT	
	Batch: M103693	
11.0	AN3C7A	BOLT
	Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)	
	BOLT	
	Batch: M103668	
		W 0706-28 X10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 6/6/2007 1:56:29 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKID ASSEMBLY

Job Number: 32794A

Part Number: D412742043

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

AN960C9

washer

(PTD)

Comment: Qty.: 44.0000 Each(s)/Unit Total : 44.0000 Each(s)

washer

Batch:

M104963
M104887



07.07.114

13.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Spray inside tube of D3391-021/-023/-025 with LPS-3 as per Dwg D3391

A/R LPS-3 M103674

2-Install tubes together and seal them all the way around using Sikaflex 241/291. Ensure tube ends line-up with saddle holes for proper alignment. using 7/16" "T" Pins.

A/R Sikaflex-241/291 M104732

Expiry date: 07-10

3-Install wearplates as per Dwg D3391. Ensure that plastic washers are against wearplate, then topped with the SS washer. Coat bolts with LPS "procyon".

Seal all bolts with sikaflex except ones with inserts on inside of tube ,hand tighten only bolts with no sikaflex.

A/R LPS Procyon

A/R Sikaflex-241/291 M104732

Expiry date: 07-10

4-Remove "T" pins once sikaflex is dry.

5-Coat all exposed hardware with LPS Procyon. Remove any excess off with MEK degreaser.

07.07.114

14.0 QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

15.0 PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

013

Identify and pack for shipping as per PPP D412-742-043

Location:

PPP Rev: PPP B32795

6/7/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
07-07-05	12-0						

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: Date: 07107105
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
07-07-05	12-0	The wearplate slots are visible on the outer side edges of the washers. Root Cause: the wearplate slots had to be elongated to compensate for the rubber seal under the wear plates.	07-07-05	I t is acceptable to replace (in this w/o only) the AN960C10L with AN960C9 washers.	07-07-05	2	07-07-05 for Bill.	07-07-05

NOTE: Date & initial all entries

Date: Wednesday, 6/6/2007 1:56:29 PM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKID ASSEMBLY

Job Number: 32794A

Part Number: D412742043

Job Number:



Seq. #: Machine Or Operation:

Description :

16.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

2007/07/12

Job Completion



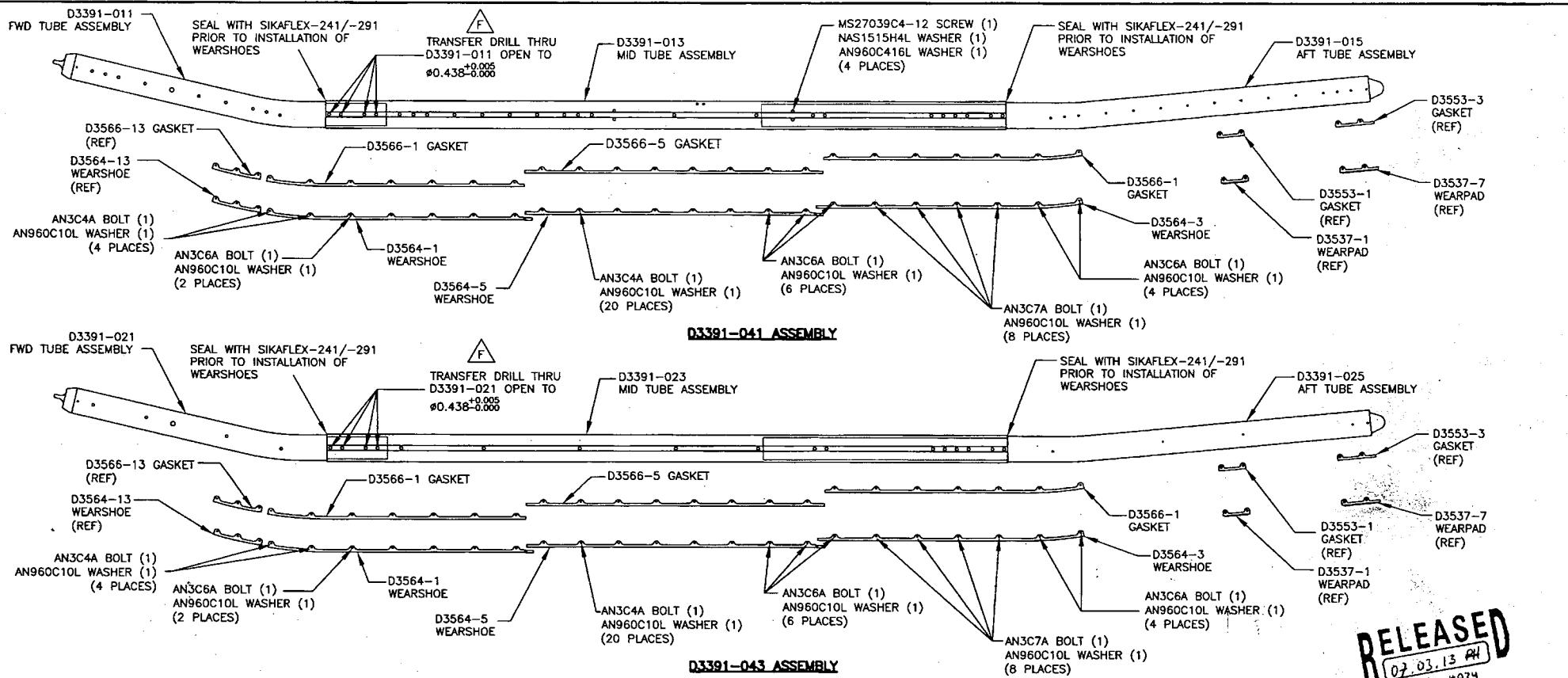
U 07.07.12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



RELEASED
07.03.13 PH
per ECN #934

D3391-041/-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY	QTY	PART NUMBER	DESCRIPTION
-041	.043	D3391-041	FLOAT SKIDTUBE ASSEMBLY
X	X	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1	1	D3391-011	FWD TUBE ASSEMBLY
1	1	D3391-013	MID TUBE ASSEMBLY
1	1	D3391-015	AFT TUBE ASSEMBLY
1	1	D3391-021	FWD TUBE ASSEMBLY
1	1	D3391-023	MID TUBE ASSEMBLY
1	1	D3391-025	AFT TUBE ASSEMBLY
1	1	D3564-1	WEARSHOE
1	1	D3564-3	WEARSHOE
1	1	D3564-5	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
24	24	AN3C4A	BOLT
12	12	AN3C6A	BOLT
6	6	AN3C7A	BOLT
44	44	AN960C10L	WASHER
4	4	MS27039C4-12	SCREW
4	4	NAS1515H4L	WASHER
4	4	AN960C416L	WASHER

UNCONTROLLED
WORK ORDER
SUBJECT TO AMENDMENT
WITHOUT NOTICE
ENGINEERING
RETURN TO
SHOP COPY
DRAFTED COPY

GENERAL NOTES

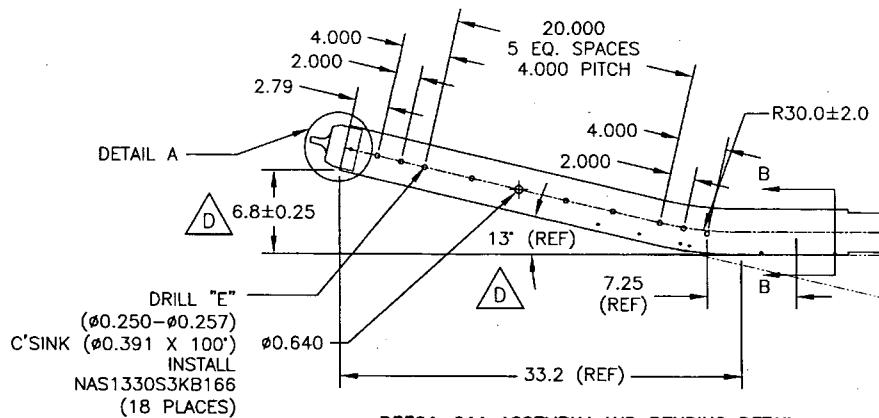
- 1) ALL DIMENSIONS ARE IN INCHES
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 4) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH
AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH
LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS
OFF POWDER COATING WITH MEK DEGREASER.
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL 'E' SIZE HOLES ($\phi 0.250$ - $\phi 0.257$)
FOR WEARSHOE INSERTS. C'SINK $\phi 0.391$ / $\phi 0.425 \times 100^\circ$ AS APPLICABLE AND
INSTALL INSERTS EXCEPT WHERE INDICATED.

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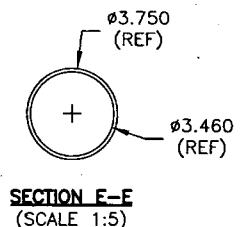
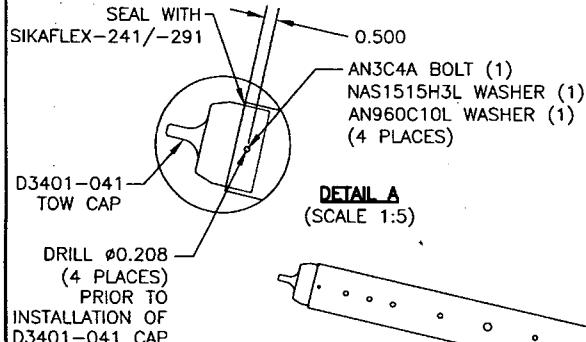
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DESIGN	DRAWN BY	DART AEROSPACE USA, INC.
PH	PH	PORT HUDDLE, WA
CHECKED	APPROVED	DRAWING NO. D3391
DATE		REV. F SHEET 1 OF 5
07.01.18		TITLE 412 FLOAT SKIDTUBE SCALE NTS

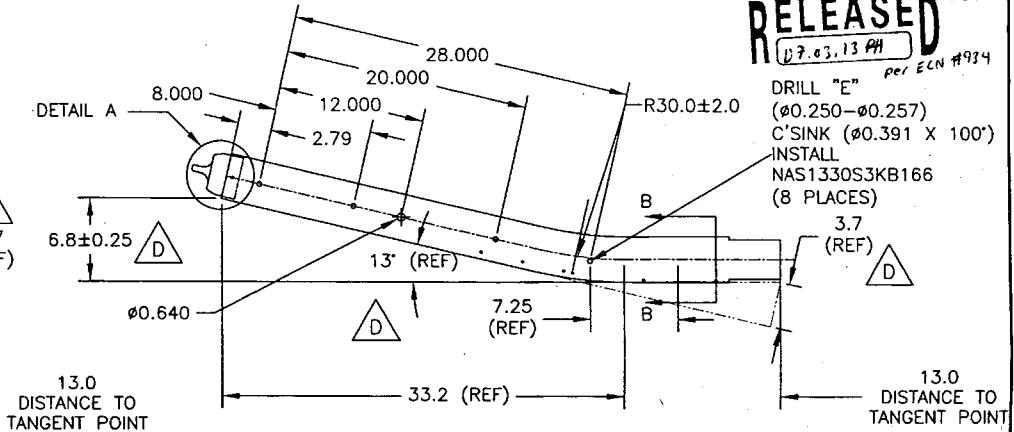
RELEASED
D7.03.13 PM
per ECN #934



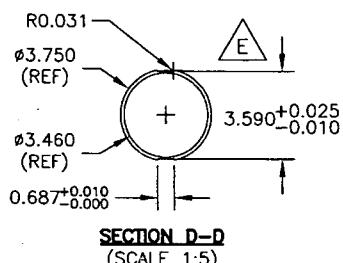
D3391-011 ASSEMBLY AND BENDING DETAIL



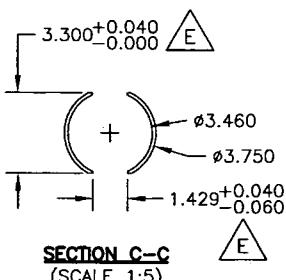
SECTION E-E
(SCALE 1:5)



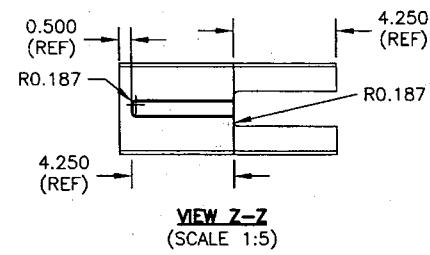
D3391-021 ASSEMBLY AND BENDING DETAIL



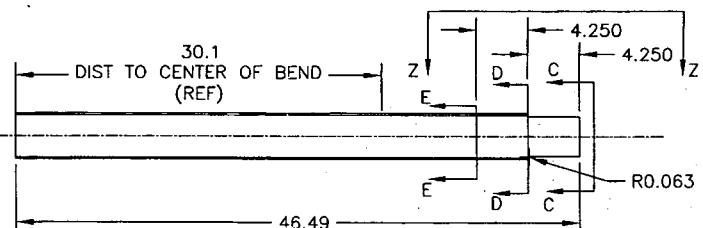
SECTION D-D
(SCALE 1:5)



SECTION C-C
(SCALE 1:5)



VIEW Z-Z
(SCALE 1:5)



D3391-1 DRILLING AND CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)

D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X		D3391-011	FWD TUBE ASSEMBLY
X		D3391-021	FWD TUBE ASSEMBLY
1	1	D6013-047	FWD TUBE
1	1	D3401-041	TOW CAP
1	1	D3564-13	WEARSHOE
1	1	D3566-13	GASKET
10	10	AN3C4A	BOLT
4	4	NAS1515H3L	WASHER
10	10	AN960C10L	WASHER
30	20	NAS1330S3KB166	INSERT (OR NAS1330C3KB166)

NO. 3294A
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

SHOP COPY
RETURN TO
ENGINEERING

REVISION
NO. 1

DATE 07.01.18

REV. F

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DATE 07.01.18

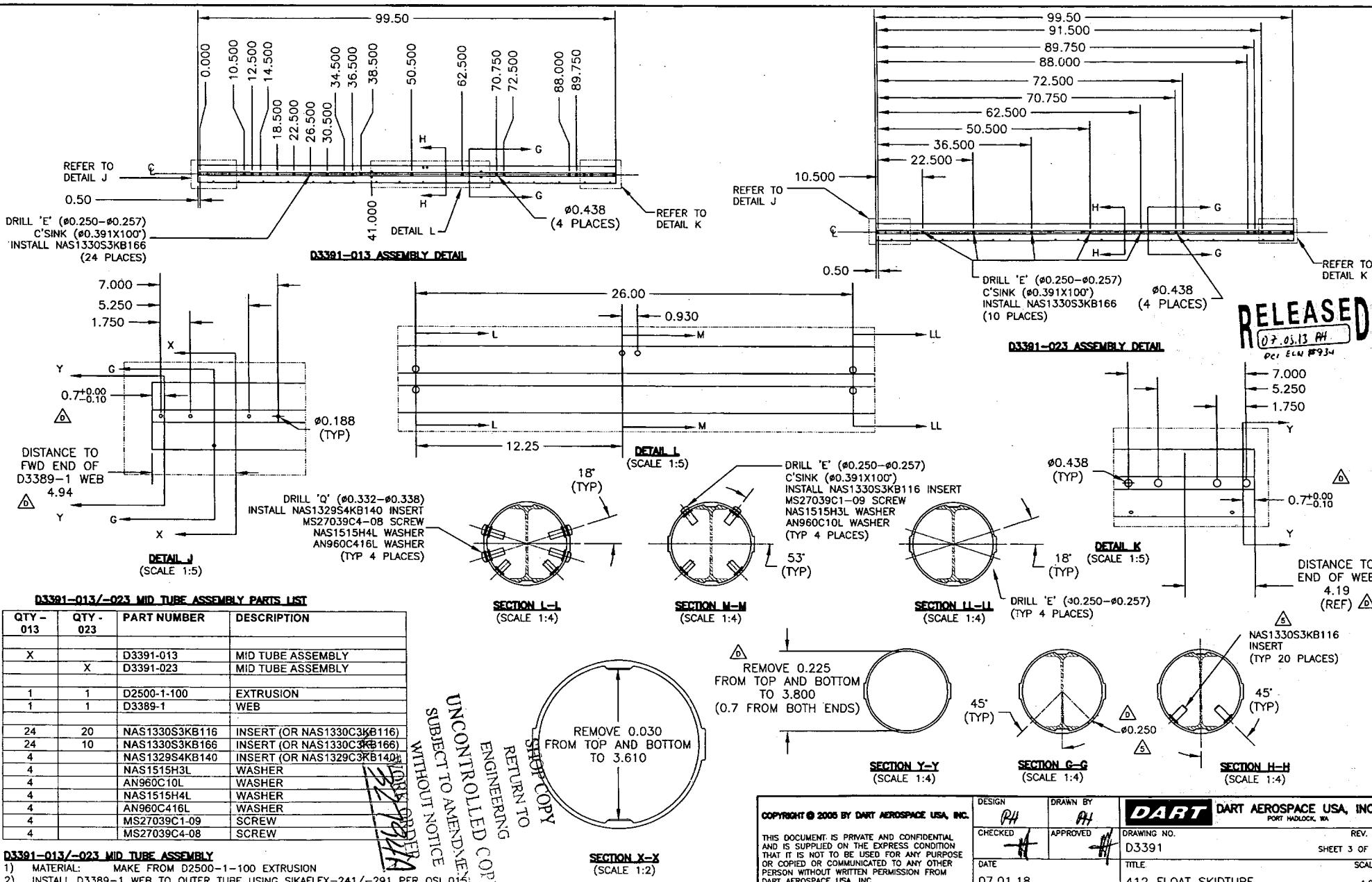
DRAWING NO. D3391

SHEET 2 OF 5

TITLE 412 FLOAT SKIDTUBE

SCALE 1:10

DART DART AEROSPACE USA, INC.
PORT HADLOCK, WA

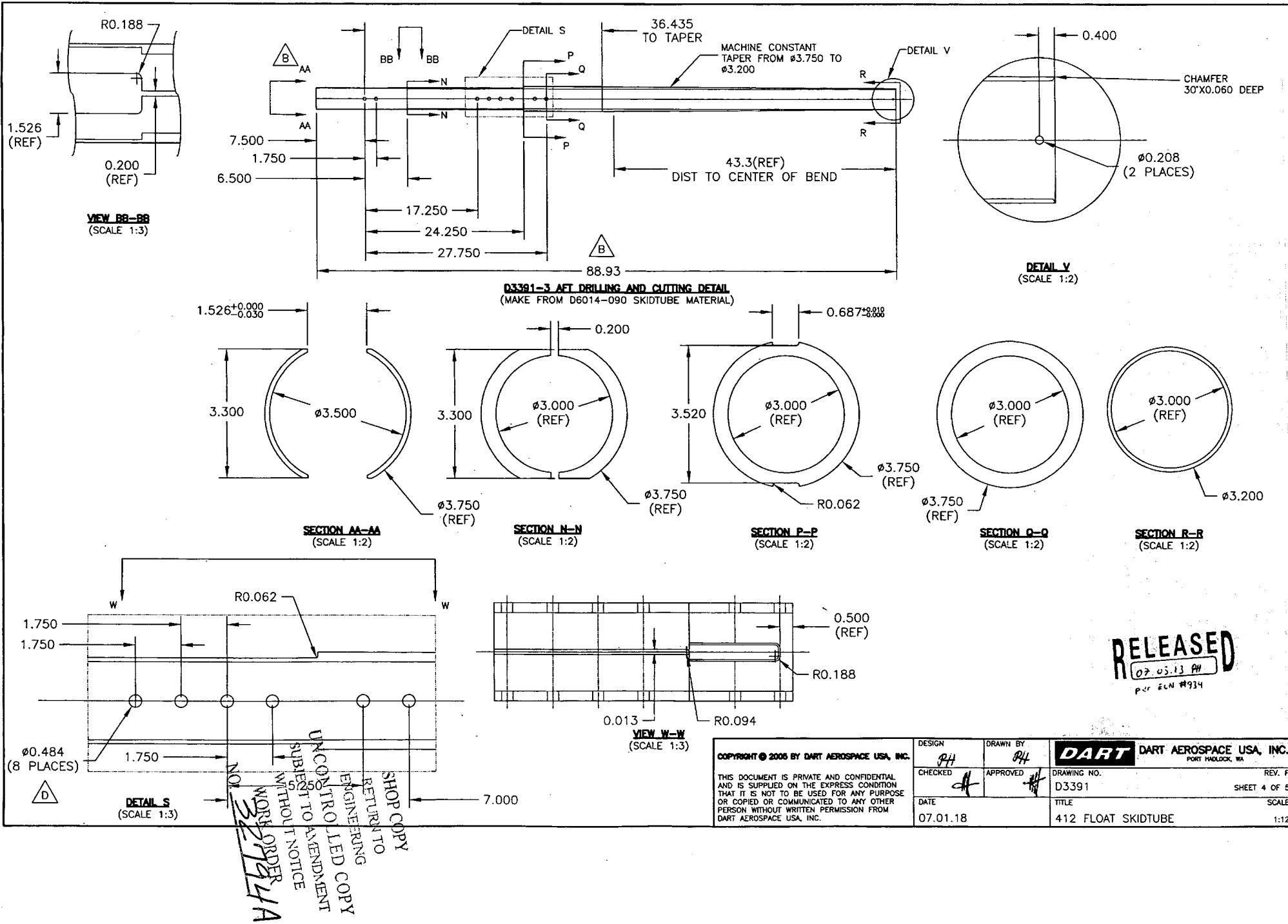


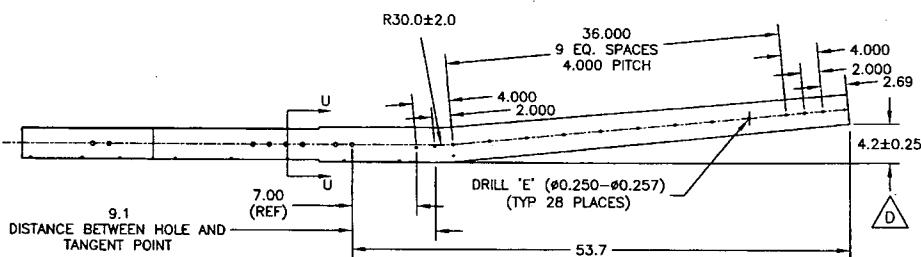
D3391-013/-023 MID TUBE ASSEMBLY

1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX

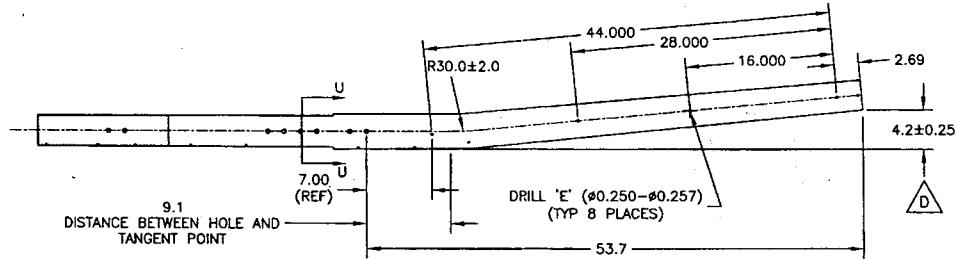
D3391-013-023 MID TUBE ASSEMBLY

1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PFR OSI 015

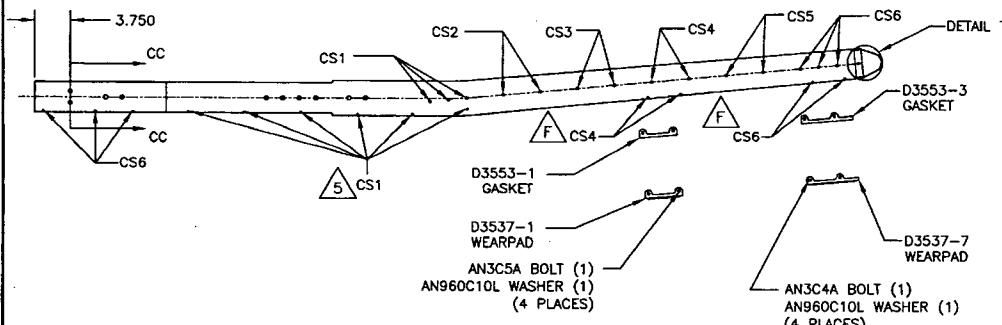




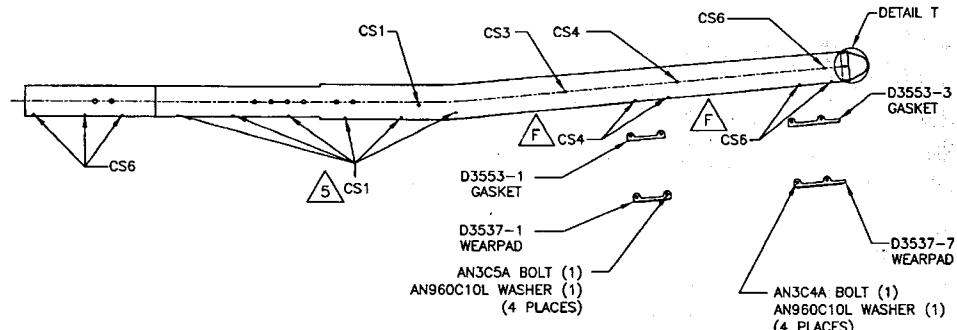
D3391-015 BENDING AND ASSEMBLY DETAIL



D3391-025 BENDING AND ASSEMBLY DETAIL



D3391-015 INSERT AND WEARPAD INSTALLATION DETAIL
(SEE TABLE)



D3391-025 INSERT AND WEARPAD INSTALLATION DETAIL
(SEE TABLE)

D3391-015/-025 AFT TUBE ASSEMBLY PARTS LIST

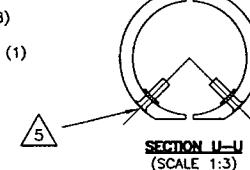
QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X	X	D3391-015	AFT TUBE ASSEMBLY
X	X	D3391-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
1	1	D3537-1	WEARPAD
1	1	D3537-7	WEARPAD
1	1	D3553-1	GASKET
1	1	D3553-3	GASKET
18	14	NAS1330S3KB366	INSERT (OR AES10KB366)
4	2	NAS1330S3KB316	INSERT (OR NAS1330C3KB316)
8	6	NAS1330S3KB266	INSERT (OR NAS1330C3KB266)
4	4	NAS1330S3KB216	INSERT (OR NAS1330C3KB216)
16	12	NAS1330S3KB166	INSERT (OR NAS1330C3KB166)
4	4	NAS1330S4KB151	INSERT (OR NAS1330C4KB151)
6	6	AN3C4A	BOLT
4	4	AN3C5A	BOLT
2	2	NAS1515H3L	WASHER
10	10	AN960C10L	WASHER

C'SINK AND INSTALL NAS1330S3KBXXX IN HOLES MARKED CS1-CS6 AS FOLLOWS

HOLES MARKED	QTY D3391-015	QTY D3391-025	C'SINK	P/N
CS1	18	14	Ø0.425	NAS1330S3KB366
CS2	4		Ø0.391	NAS1330S3KB366
CS3	4	2	Ø0.391	NAS1330S3KB316
CS4	8	6	Ø0.391	NAS1330S3KB266
CS5	4		Ø0.391	NAS1330S3KB216
CS6	16	12	Ø0.391	NAS1330S3KB166

DRILL 'Q' (Ø0.332 - Ø0.338)
C'SINK (Ø0.529X100')
NAS1330S4KB151 INSERT (1)
(4 PLACES)

SECTION CC-CC
(SCALE 1:3)



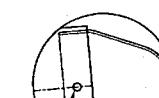
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SECTION U-U
(SCALE 1:3)

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Jason Murdoch

From: David Shepherd [dshepherd@dart Aero.com]
Sent: Friday, June 08, 2007 11:50 AM
To: 'Jason Murdoch'
Cc: 'Peter Hum'
Subject: RE: 412 floats

My preference would be to install the new parts.
If we don't have these and won't have them for a while, then this is an acceptable deviation.

David

From: Jason Murdoch [mailto:jmurdoch@dart Aero.com]
Sent: Thursday, June 07, 2007 2:25 PM
To: 'David Shepherd'
Cc: 'Peter Hum'
Subject: 412 floats
Importance: High

Good day, if you remember, we had an issue with the wearplate holes not lining up with the insert holes, when the rubber gasket was introduced. To fix this, we slotted the hole to make it fit until the new dwg's, and parts were released. I have a slight issue with the hole being apparent on 2 tube ass'y on the bottom side of the AN960C10 washer, which was installed as per the dwg. What I would like to do, for the time being is substitute the AN960C10, for a AN960C9 washer. This will cover up the tiny gap on the bottom side of the original washer, because the 9 has a wider OD, and the ID, and the thickness will still be the same as the 10. These washers will go along the D2577 wearplates to look normal, and this will strictly be cosmetic. Is this acceptable with you?

jmurdoch@dart Aero.com
Q.C. COORDINATOR

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.472 / Virus Database: 269.8.11/838 - Release Date: 6/7/2007 2:21 PM

No virus found in this outgoing message.
Checked by AVG Free Edition.
Version: 7.5.472 / Virus Database: 269.8.11/838 - Release Date: 6/7/2007 2:21 PM